

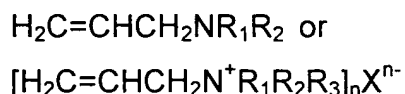
## **AMENDMENTS TO THE CLAIMS:**

The listing of claims will replace all prior versions, and listings of claims in the application:

### **LISTING OF THE CLAIMS**

1. (Previously Presented) A process for the electrodeposition of a nickel or nickel-alloy coating on a substrate, the process comprising:

immersing a metal substrate in a bath comprising nickel ions and an additive having the general formula:



wherein  $\text{R}_1$ ,  $\text{R}_2$  and  $\text{R}_3$  are selected from the functional groups consisting of hydrogen, methyl, ethyl, propyl, allyl, propanediol and combinations thereof; and  $\text{X}^{n-}$  is an n-valent inorganic or organic anion; and

electrodepositing nickel onto the metal substrate.

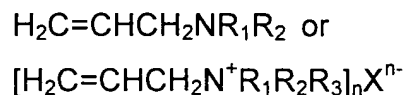
2. (Previously Presented) The process according to claim 1 wherein  $\text{X}^{n-}$  is selected from the group consisting of chloride, bromide, fluoride, sulfate, acetate, and tetrafluoroborate.

3. (Previously Presented) The process according to claim 1 wherein the bath further comprises alloying metal ions, and electrodepositing nickel onto the metal substrate comprises electrodepositing a nickel-alloy onto the metal substrate.

4. (Previously Presented) An aqueous acidic plating bath for the electrodeposition of a nickel or nickel alloy deposit on a substrate comprising:

a) nickel ions; and

b) an additive having the general formula:

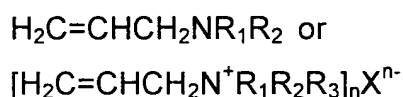


wherein  $\text{R}_1$ ,  $\text{R}_2$  and  $\text{R}_3$  are selected from the functional groups consisting of hydrogen,

methyl, ethyl, propyl, allyl, propanediol and combinations thereof; and  $X^{n-}$  is an n-valent inorganic or organic anion.

5. (Previously Presented) An aqueous acidic plating bath for the electrodeposition of a nickel or nickel alloy deposit on a substrate comprising:

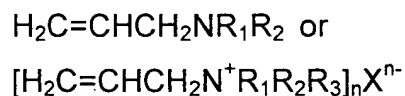
- a) nickel ions;
- b) at least one Class I brightener; and
- c) an additive having the general formula:



wherein  $R_1$ ,  $R_2$  and  $R_3$  are selected from the functional groups consisting of hydrogen, methyl, ethyl, propyl, allyl, propanediol and combinations thereof; and  $X^{n-}$  is an n-valent inorganic or organic anion.

6. (Previously Presented) An aqueous acidic plating bath for the electrodeposition of a nickel or nickel alloy deposit on a substrate comprising:

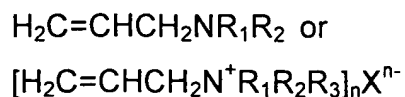
- a) nickel ions;
- b) at least one Class II brightener; and
- c) an additive having the general formula:



wherein  $R_1$ ,  $R_2$  and  $R_3$  are selected from the functional groups consisting of hydrogen, methyl, ethyl, propyl, allyl, propanediol and combinations thereof; and  $X^{n-}$  is an n-valent inorganic or organic anion.

7. (Previously Presented) An aqueous acidic plating bath for the electrodeposition of a nickel or nickel alloy deposit on a substrate comprising:

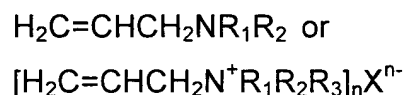
- a) nickel ions;
- b) at least one Class I brightener;
- c) at least one Class II brightener; and
- d) an additive having the general formula:



wherein  $\text{R}_1$ ,  $\text{R}_2$  and  $\text{R}_3$  are selected from the functional groups consisting of hydrogen, methyl, ethyl, propyl, allyl, propanediol and combinations thereof; and  $\text{X}^{n-}$  is an n-valent inorganic or organic anion.

8. (Previously Presented) An aqueous acidic plating bath for the electrodeposition of a nickel or nickel alloy deposit on a substrate comprising:

- a) nickel ions;
- b) alloying metal ions;
- c) at least one Class I brightener;
- d) at least one Class II brightener; and
- e) an additive having the general formula:



wherein  $\text{R}_1$ ,  $\text{R}_2$  and  $\text{R}_3$  are selected from the functional groups consisting of hydrogen, methyl, ethyl, propyl, allyl, propanediol and combinations thereof; and  $\text{X}^{n-}$  is an n-valent inorganic or organic anion.

9. (Previously Presented) The bath according to claim 8 wherein the alloying metal ions are selected from the group consisting of iron, cobalt, tin, and zinc.

10. (Previously Presented) The bath according to claim 4 wherein  $\text{X}^{n-}$  is selected from the group consisting of chloride, bromide, fluoride, sulfate, acetate, and tetrafluoroborate.

11. (Previously Presented) The process according to claim 3, wherein the alloying metal ions are selected from the group consisting of iron, cobalt, tin, and zinc.

12. (Currently Amended) The aqueous acidic plating bath according to claim 4, wherein the additive comprises ~~diallylamine~~ diallylamine.

13. (Currently Amended) The aqueous acidic plating bath according to claim 4, wherein the additive comprises ~~triaallylamine~~ triallylamine.

14. (Previously Presented) The aqueous acidic plating bath according to claim 4, wherein the additive comprises diallyldimethyl ammonium chloride.

15. (Previously Presented) The aqueous acidic plating bath according to claim 4, wherein the additive is present in an amount of from about 5 mg/l to about 160 mg/l.

16. (Previously Presented) The aqueous acidic plating bath according to claim 4, wherein the additive is present in an amount of from about 5 mg/l to about 100 mg/l.

17. (Previously Presented) The aqueous acidic plating bath according to claim 4, wherein the additive is present in an amount of from about 6 mg/l to about 80 mg/l.

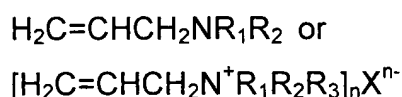
18. (Currently Amended) The process according to claim 1, wherein the additive comprises ~~diallylamine~~ diallylamine.

19. (Currently Amended) The process according to claim 1, wherein the additive comprises ~~triaallylamine~~ triallylamine.

20. (Previously Presented) The process according to claim 1, wherein the additive comprises diallyldimethyl ammonium chloride.

21. (New) A process for the electrodeposition of a nickel or nickel-alloy coating on a substrate, the process comprising:

immersing a metal substrate in a bath comprising nickel ions and an additive having the general formula:

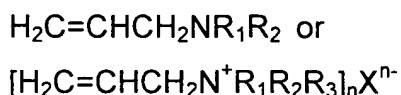


wherein  $\text{R}_1$ ,  $\text{R}_2$  and  $\text{R}_3$  are selected from the functional groups consisting of hydrogen, methyl, ethyl, propyl, allyl, propanediol and combinations thereof; and  $\text{X}^{n-}$  is an n-valent

inorganic or organic anion and n comprises the positive integer of n-; and  
electrodepositing nickel onto the metal substrate.

22. (new) A process for the electrodeposition of a nickel or nickel-alloy coating on a substrate, the process comprising:

immersing a metal substrate in a bath comprising nickel ions and an additive having the general formula:



wherein  $\text{R}_1$ ,  $\text{R}_2$  and  $\text{R}_3$  are selected from the functional groups consisting of hydrogen, methyl, ethyl, propyl, allyl, propanediol and combinations thereof; and  $\text{X}^{n-}$  is an n-valent inorganic or organic anion and n equals 1 or 2; and

electrodepositing nickel onto the metal substrate.